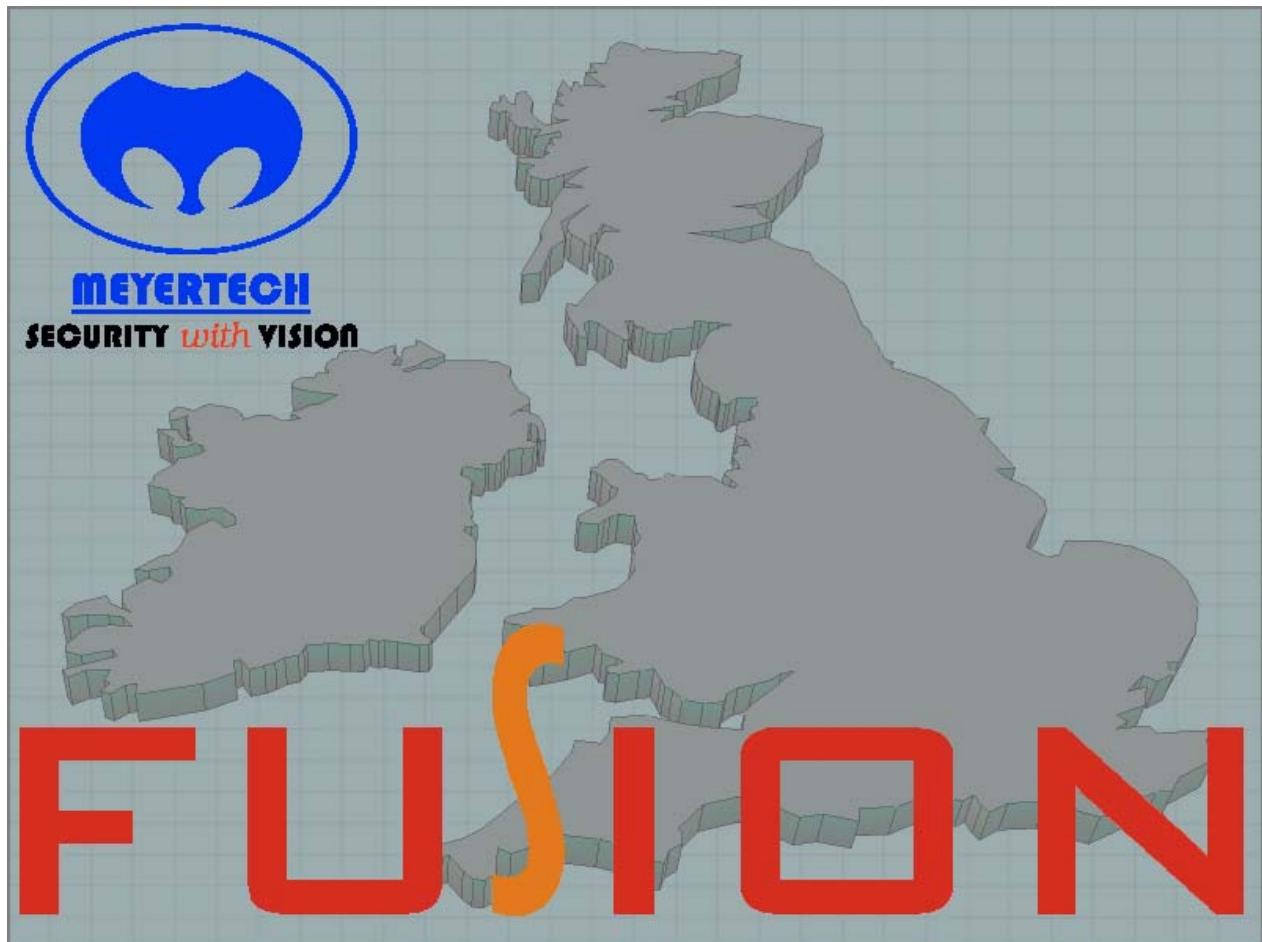




FUSION

PORTABLE MAINTENANCE UNIT USER GUIDE



FUSION-PMU

Portable Maintenance Kit
Issue 1-0

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Introduction

Thank you for purchasing Meyertech's FUSION software. Please read this user guide prior to using the software. It will help you to achieve the maximum benefit from the software package.

What is the Portable Maintenance Unit ?

The Portable Maintenance Unit (PMU) is a combination of Meyertech's Fusion LT and Mpower, brought together via FusionSuite application manager.

Fusion LT allows the engineer to carry out tests and diagnose problems on a Meyertech system, whilst Mpower allows the configuration of all the setup and advanced features of a Meyertech CCTV system.

KEY FEATURES

- FUSION LT, A SIMPLIFIED FRONTEND
- MPower, AN ADVANCED CONFIGURATION TOOL
- FUSIONSUITE APPLICATION MANAGER, BRINGING TOGETHER THE DIFFERENT APPLICATIONS
- SINGLE LAPTOP RUNNING WINDOWS XP

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PMU OVERVIEW

The Portable Maintenance Unit consists of the following components:

- Laptop
- FusionSuite Application Manager for PMU
- Fusion LT for PMU
- Mpower
- RS232 to USB harness
- RS232 to RS485 harness

Harnesses

The two harnesses if not disassembled will only connect into the Laptop in the correct configuration.

The RS232 to USB harness consists of a USB to serial port converter attached to an RS232 cable with the following connections as shown below. The USB connector connects into the laptop (is operated as comm port 4) and the 9 way D-type connects into the PC port on Meyertech equipment or a suitable breakout panel.

Rs232 cable – 1.5metre

Signal	Female 9 way D-type socket	Male 9 way D-type plug
Red	2 (Rx)	3 (Rx)
White	3 (Tx)	2 (Tx)
Black	5 (Gnd)	5 (Gnd)

The RS232 to RS485 harness consists of an RS232 cable connecting the Laptop to a RS232 to RS485 converter, with the following connections:

RS485 cable – 1.5 metre

Signal	2 part 5 way	Male 9 way D-type plug
Red	1 (A)	4 (-)
White	2 (B)	5 (+)
Black	5 (Gnd)	6 (Gnd)

The RS232 to RS485 converter is a K2-ADE adaptor (replacements can be obtained from Meyertech). The adaptor is pre-configured, however the documentation for this adaptor is included as an appendix to this manual.

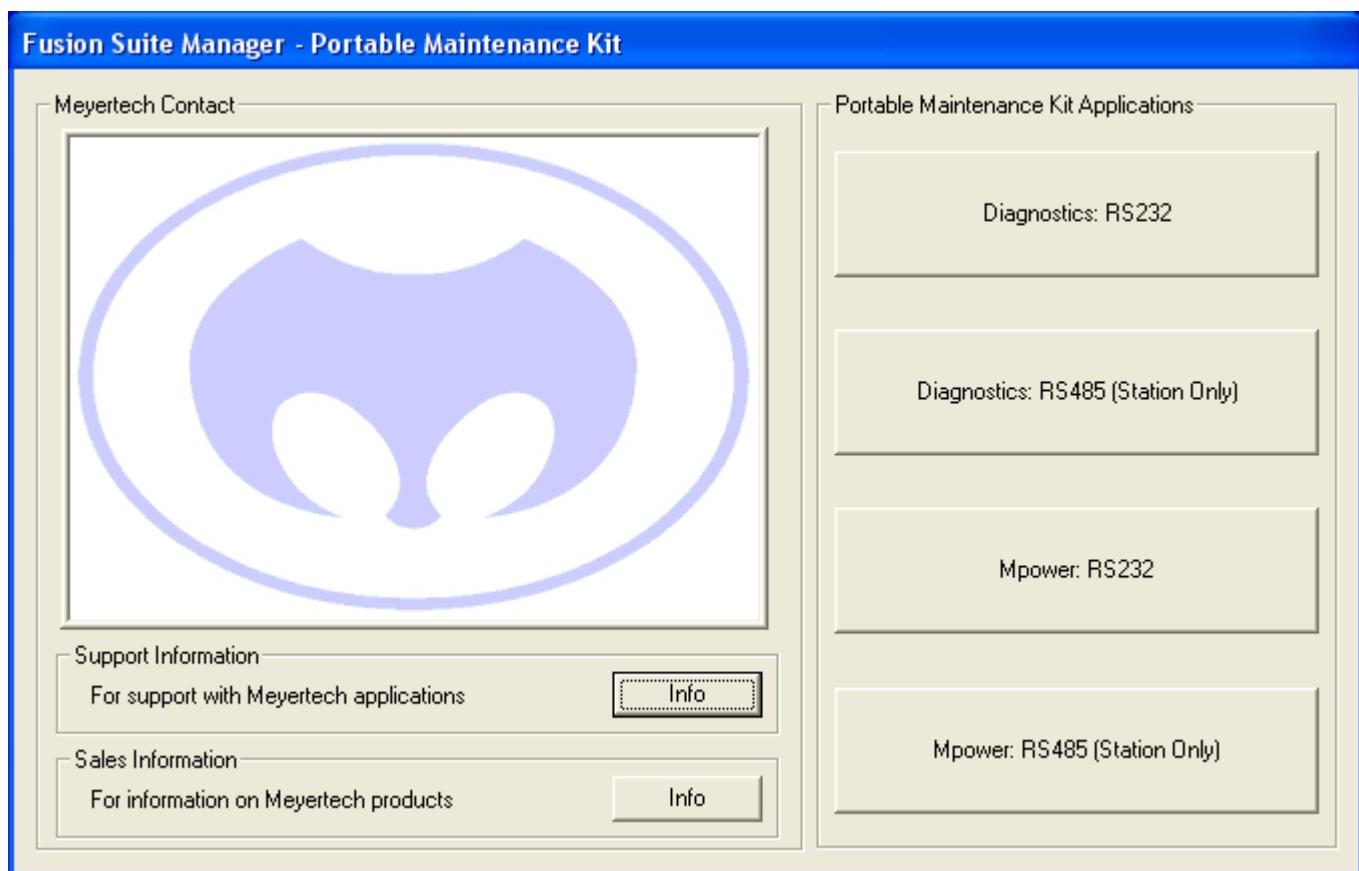
The adaptor can connect directly into the Meyertech RS485 connector or a suitable breakout panel.

FUSION SUITE OVERVIEW

Selection Screen

The selection screen (shown below) is the initial screen displayed when the PMU Laptop is powered on. FUSIONSUITE is normally configured to automatically start on power on.

The FUSION screen is split into two main areas, **Application selection** and **Contact information** all of which we will now explore.



Application selection

This version of FusionSuite manager has been configured for the PMU. The following applications can be run:

- Diagnostics using the RS232 cable
This is FusionLT for PMU running over an RS232 (point-to-point) network
- Diagnostics using the RS485 cable
This is FusionLT for PMU running over an RS485 (polled) network
- Mpower using the RS232 cable
This is Mpower running over an RS232 (point-to-point) network
- Mpower using the RS485 cable
This is Mpower running over an RS485 (polled) network. This is not recommended for transferring large blocks of data. The recommended method for Mpower is over a point-to-point RS232 network.

Did You Know !

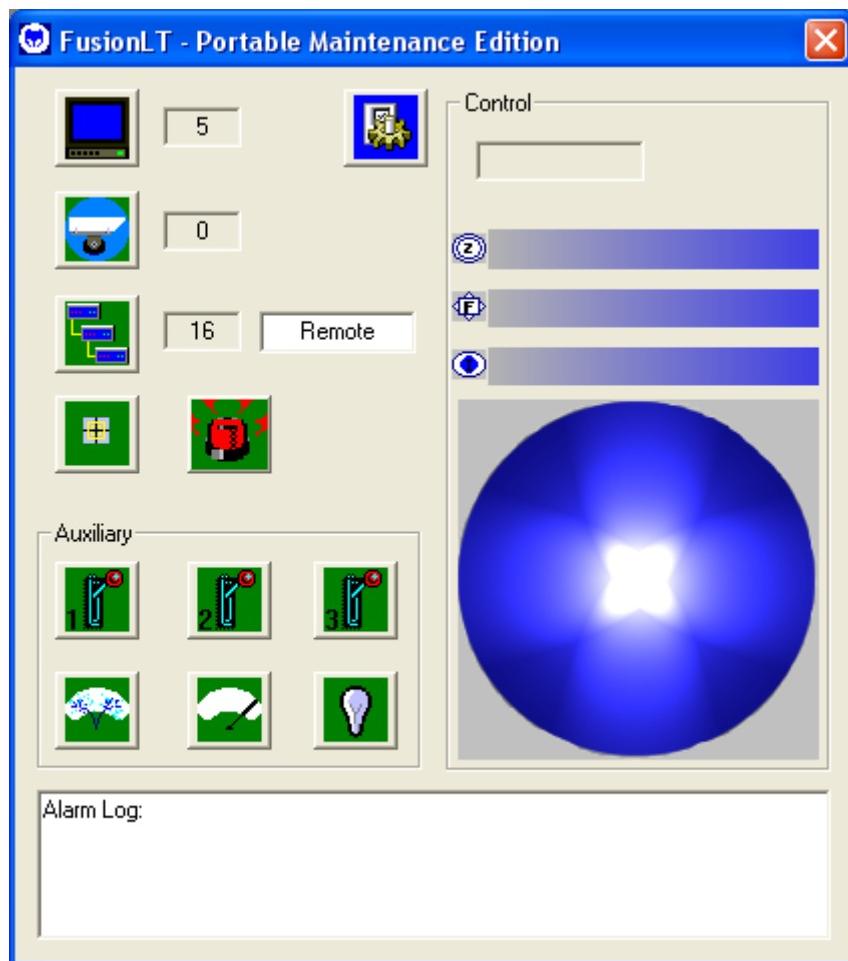


To exit FusionSuite Manager and return to Windows hit the ESC key when the FusionSuite menu is displayed

Fusion LT for PMU

The Fusion LT application is available in a variety of forms – this version is referred to as FusionLT for PMU and has some specific functionality applicable to its role as a maintenance and diagnostics tool.

On selecting DIAGNOSTICS from FusionSuite the application will appear as shown below.



The dialog window displayed is grouped into a number of key areas as detailed below.

Numeric Keypad

All numeric entry is done via the pop-up numeric keypad. This pop-up will automatically be displayed whenever a numeric entry has been requested (eg camera selection)



Camera selection

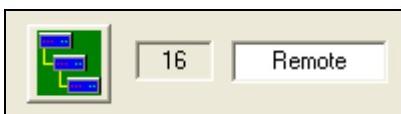
Three buttons are provided for monitor, camera and site selection.



To select a camera, press this button. The currently selected camera is displayed in the box.



To select a monitor, press this button. The currently selected monitor is displayed in the box. Subsequent camera selections will appear on this monitor



To select a new site, press this button. The currently selected site is displayed in the box. The text box shows the name of the site – see later section for configuration.

Auxiliary Control

Fusion LT provides control of 6 relays. Fusion LT generates the standard ZoneVu commands for the 6 relays as detailed below. Third party equipment may behave differently than indicated on the button icons.

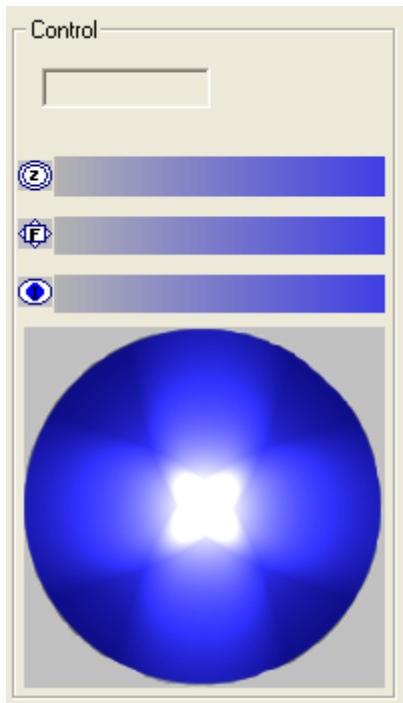


- Auxiliary 1
- Auxiliary 2
- Auxiliary 3
- Wash
- Wipe
- Lamp

As standard with ZoneVu equipment Auxiliary 3 and Wash are momentary operations. Auxiliary 1,2, Wipe and Lamp are latched operations.

PTZF Control

Fusion LT provides control of the pan, tilt, zoom and iris functions.



Starting from the top, the text box displays the current operation.

The three slider bars are for controlling (in order) zoom, focus and iris. The further away from the centre of the slider you select, the faster the function is performed.

The ball is for pan and tilt selection. The further away from the centre of the ball you select, the faster the (combined) function is performed.

Control grant and denied status is shown in the Alarm Log (see later section).

Preset Commands

Recall preset commands can be generated by pressing the preset recall button



Alarms

Fusion LT will both display alarm information and allow the operator to manually generate alarms.

Alarm information is displayed in the text box shown below. This display is continually added to so earlier messages can be reviewed by using the scroll bars.



Alarms can be raised by pressing the alarm button

Fusion LT will then show the alarm raise dialog. From this dialog window an alarm type can be entered and then reported to the ZoneVu system as if it were a real alarm.



By entering a camera number and an alarm number, alarms can be manually raised – using the **Raise Alarm** button – or cleared using the **Clear Alarm** button.

The definition of alarm numbers can be found in the **ZSC-1000 user manual**.

Mpower

The Mpower supplied as part of the Fusion-PMU is the same as provided standalone. Please refer to the **Mpower User manual** for instructions.

Configuration

The Fusion-PMU laptops are already preconfigured with an address of MAC 10.

Fusion LT can be configured to display a site name for the currently selected site.

- Select the site number to be configured
- Select the text box adjacent to the site number
- Enter the text name for the site
- Change the site number to the next to be configured and repeat

This will store site names against associated site numbers.

Servicing and Support

Servicing

Your FUSION PC Hardware requires no Planned Preventive Maintenance periods (PPM's), as it is mainly solid state in design.

Your FUSION PC Hardware contains no serviceable parts and should be returned to our Service Centre in Oldham for repair or replacement under warranty. Any repairs, attempted repairs or replaced components not carried out by the Meyertech Service Centre will void all Meyertech warranties and liabilities.

If your FUSION PC Hardware has to be returned to our Service Centre please follow the returns procedure below, otherwise delays may be incurred in returning or replacing it.

Returns Procedure

Prior to returning your Fusion Workstation, Monitor or Touch screen

1. Contact our Oldham office by phone on +44 (0) 161 628 8406 or by email support@meyertech.co.uk for a Goods Return Number, GRN.
2. Our staff along with the reported problem will log the GRN.
3. Pack the Fusion Workstation, Monitor or Touch screen into the original packing it was delivered in. Failure to do so means the equipment may incur further damage in transit, which Meyertech cannot be responsible for.
4. Organise delivery of the equipment back to our Oldham office (address is shown below). Use a reputable carrier, as again Meyertech cannot accept liability for loss or damage of goods in-transit.
5. On receiving the Fusion Workstation, Monitor or Touch screen our staff will, after initial examination advise of the course of action we intend to take.
 - a. Repair the Fusion Workstation, Monitor or Touch screen under warranty. The Fusion Workstation, Monitor or Touch screen will be repaired and returned to you free of charge.
 - b. Replace the Fusion Workstation, Monitor or Touch screen under warranty. The Fusion Workstation, Monitor or Touch screen will be replaced and returned to you free of charge.
 - c. Repair the Fusion Workstation, Monitor or Touch screen at a quoted cost. An official purchase order to cover the cost and return of the product will be required prior to commencement of repair.
 - d. Advise you that the Fusion Workstation, Monitor or Touch screen is not repairable. You can then decide to have the product returned to you at the standard delivery charge or we can dispose of the product free of charge.

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Fax: +44 (0) 161 628 9811**

Support

Meyertech offer comprehensive levels of support during the product's warranty period. Our support team will be happy to help with any problem you may experience relating to the installation or operation of FUSION

1. Telephone support (+44(0)161 628 8406), which is available during normal office hours 9AM – 5PM Monday to Friday excluding Bank holidays. This support is free of charge.
2. Email support. Available 24 hours a day. Our normal response to emails is next working day. This support is free of charge. support@meyertech.co.uk
3. By Facsimile (+44(0)161 628 9811). Available 24 hours a day. Our normal response to facsimiles is next working day. This support is free of charge.
4. Site visits. Subject to availability, our engineers are available to attend site to assess and help with particular system problems firsthand. This service is chargeable. Please contact our Support department on +44(0)161 628 8406 for further details and availability.

Meyertech offer Extended Support Contracts on all their software products. Please contact our Sales department on 0161 628 8406 to discuss your requirements or visit our website www.meyertech.co.uk



Meyertech Limited is a member of the CCTV User Group.

Warranty

Please refer to Meyertech Limited 'Terms & Conditions of Sale of Goods & Services' for interpretation.

1. If the Buyer establishes to the Seller's reasonable satisfaction that there is a defect in the materials or workmanship of the Goods manufactured, then the Seller shall at its option, at its sole discretion and within a reasonable time,
 - a. arrange for the repair or making good such defect or failure in such Goods free of charge to the Buyer (including all costs of transportation of any Goods or materials to and from the Buyer for that purpose),
 - b. replace such Goods with Goods which are in all respects in accordance with the Contract, or

subject, in every case, to the remaining provisions of this Condition 1 provided that the liability of the Seller under this Condition 1 shall in no event exceed the purchase price of such Goods and performance of anyone of the above options shall constitute an entire discharge of the Seller's liability under this warranty.

2. Condition 1 shall not apply unless the Buyer:
 - a. notifies the Seller in writing of the alleged defect within 12 (twelve) months from delivery or such other period or periods as may be agreed in writing between the Seller and the Buyer, and
 - b. allows the Seller a reasonable opportunity to inspect the relevant Goods.
3. For the avoidance of doubt, the Seller shall be under no liability under the warranty in Condition 1 above:
 - a. where such defects arise from any drawing, design or specification supplied by the Buyer; or
 - b. where such defects arise from fair wear and tear, wilful damage, or negligence of a party other than the Seller (or its employees or authorised personnel), abnormal working conditions, failure to follow the Seller's instructions (whether oral or in writing), misuse or alteration or repair of the Goods without the Seller's approval; or
 - c. where such defects arise in parts, materials or equipment which have not been manufactured or designed by the Seller but have been purchased at the Buyer's request by the Seller from the Buyer's designer and manufacturer or from some other third party (the "**Third Party Supplier**").
 - d. if the total price of the Goods has not been paid by the due date for payment
 - e. in respect of any type of defect, damage or wear specifically excluded by the Seller by notice in writing; or
 - f. if the Buyer makes any further use of the Goods after giving notice in accordance with Clause 1
4. Any repaired or replaced Goods shall be redelivered to the Buyer free of charge to the original point of delivery but otherwise in accordance with and subject to these Conditions.
5. Alternatively to Condition 1 the Seller shall be entitled at its absolute discretion on return of the defective Goods to the Seller (at the Seller's request) to refund the price of the defective Goods in the event that such price shall already have been paid by the Buyer to the Seller, or, if such price has not been paid, to relieve the Buyer of all obligation to pay the sum by the issue of a credit note in favour of the Buyer in the amount of such price.
6. In respect of all Goods supplied to the Seller by a Third Party Supplier the Seller will on request pass on to the Buyer (in so far as reasonably possible) the benefit of any warranty given to the Seller by such Third Party Supplier and will (on request) supply to the Buyer details of the terms and conditions of such warranty and copies of any relevant product information sheets, technical data sheets or product leaflets issued by such Third Party Supplier and the Buyer shall be solely responsible to the entire exclusion of the Seller for complying with the same.
7. For the purposes of Condition 1 references to Goods shall be deemed to exclude software.

8. The Buyer acknowledges that software in general is not error-free and agrees that the existence of such errors in the Software Programs shall not constitute a breach of this Contract.
9. In the event that the Buyer discovers a material error which results in the Programmed Products not performing substantially in accordance with the Functional Specification, or the Licensed Programs not performing substantially in accordance with the relevant Program Documentation and notifies the Seller of the error within 90 days from the date of the Seller making available the respective software to the Buyer (the "**warranty period**") the Seller shall at its sole option either refund the price which the Buyer has paid to the Seller (or if such price has not been paid, relieve the Buyer of all obligations to pay the sum) in respect of the respective software or use all reasonable endeavours to correct by patch or new release (at its option) that part of the software which does not so comply provided that such non-compliance has not been caused by any modification, variation or addition to the software not performed by the Seller or caused by its incorrect use, abuse or corruption of the software by use of the software with other software or on equipment with which it is incompatible,
10. To the extent permitted by English law, the Seller disclaims all other warranties, with respect to the software which it provides pursuant to the Contract, either express or implied, including but not limited to any implied warranties of satisfactory quality or fitness for any particular purpose.
11. The Buyer is solely responsible for various scanning the software that it receives from the Seller pursuant to the Contract.
12. The Seller warrants that it will use reasonable skill and care in providing the Services to the buyer

Maintenance

1. FUSION applications are designed to operate without any regular maintenance.

Backups

Always ensure FUSION back up's are stored separately from the PC, eg CD, DVD, Iomega Zip drive etc. This will protect the data from computer errors and/or data corruption.

Appendix A

The K2-ADE user manual is included in a separate attachment.

The units are pre-configured:

SW1	SW2	SW3	SW4	SW5	SW6
On	Off	Off	On	Off	Off

Appendix B

FUSION-PMU Start-up Procedure

Normally when your FUSION laptop is powered-up, after being shut down in the recommended way, after loading Windows it will automatically boot straight into the FUSION SUITE MANAGER application. If it fails to do this you can run the FUSION SUITE MANAGER application by double clicking the FUSION SUITE icon from the desktop.

FUSION-PMU Shutdown Procedure

Your FUSION-PMU workstation must always be shutdown by following the recommended procedure for the Widows OS you are running. Never switch-off the PC unless:

1. Windows has advised you to do so
2. The PC has locked-up and there is no reset switch.

To close the FUSION application and shut-down the PC:

1. Quit FUSION LT. Quit MPOWER. Quit FUSION SUITE.
2. Shut down Windows as recommend by the OS you are running.

FUSION-PMU Recovery Procedure

If FUSION-PMU fails to respond to user input the program or operating system might have crashed. The problem may manifest itself in a number of ways eg a Windows error screen may appear advising the application is about to close, the appearance of the egg-timer icon indicating the system is executing a command; but never completes it resulting in a 'locked-up' appearance; etc

Fault Logging and Reporting

In order for faults to be fixed in future releases of Windows and FUSION-PMU it is important that all faults are logged and reported to Meyertech.

When you experience a fault please note down as much information as you can about the status of the system when the fault occurred IE:

- What operation, if any was being performed at the time the fault occurred?

- If there are any error messages on the screen please carefully note them down before clearing them.
- How did you rectify the fault EG reset the PC

General Recovery From a Fault

1. If a minor fault occurs recovery can normally be achieved by simply exiting the FUSION applications and then restarting them from FUSION SUITE.

Recovery From a Major Fault

Recovery from a more serious fault may mean you cannot exit the FUSION applications. In this case follow the procedure below:

1. Locate the PC keyboard and press Ctrl, Alt, Delete simultaneously.
2. A pop-up window will appear giving you the option to end applications, which are currently running.
3. Select 'Meyertech Fusion' followed by 'End Task'
4. Restart FUSION SUITE by double clicking the FUSION SUITE icon on the desktop.

Alternatively if Ctrl, Alt, Delete does not work. Locate the PC and press the reset button. If the PC does not have a reset button power-down the PC, wait five minutes and then power-up the PC. The workstation will automatically 'Boot-up' into the FUSION SUITE application.

If all of the above fail it is possible data corruption has occurred. You may have to:

1. Re-install all FUSION components (Fusion LT, Mpower and FusionSuite)

Please contact Meyertech Support before attempting this operation